

REMARKS

Claims 1-21 are pending. Claim 1 is amended herein to incorporate features from claim 2. Claim 2 is cancelled herein without prejudice or disclaimer.

Applicants' Response to the Specification and Drawing Objections

The specification is objected to because of the presence and recitation of claims 1-21 on page 3, line 29 to page 8, line 6 is considered improper, and the drawings are objected to because page 8 refers to reference signs (a) and (b) which do not appear in the referenced figure 5. In response to the objections, applicants have removed specific references to claim numbering within the specification and have removed the "(a) and (b)" identifiers from the specification by amendment herein.

Additionally, the abstract is objected to because it contains more than 150 words. Applicants have amended the Abstract herein to coincide with the Office's requirements.

Applicants' Response to the Claim Rejections under 35 U.S.C. § 112

Claims 1 and 2 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. In regard to claim 1, the Office maintains that the recited language of "at least one layer ... lights" found at lines 8-13 of the claim is inconsistent with the language of "at least two laminated layers of at least one kind of reflective polarizer (a)" found at line 2. Applicants

have amended the claims herein to remove the rejected phrases and clarify the recitation of layers within the claim.

The Office has also objected to the use of parentheses in claims 1 and 2, and “the normal direction” lacking proper antecedent basis. Applicants have amended claim 1 herein by removing the parentheses and more specifically defining the front of the claimed retardation layer.

Applicants’ Response to the Claim Rejections under 35 U.S.C. §103(a)

Claims 1 and 2 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kotchick et al. (US 6,975,455 B1).

As noted above, applicants have incorporated features from claim 2 into claim 1. One feature is that the Nz coefficient of the retardation layer is not less than 2.0. The Office Action at page 4 maintains that it would have been obvious to modify commonly used quarter plate. However, a general retardation plate has an Nz coefficient of 1.0, and is far less than 2.0. Wherefore, applicants respectfully traverse as the difference of Nz coefficient causes an unexpected effect of condensation of the light, which is not taught or suggested in Kotchick. Wherefore, one of skill in the art would have no reason to modify the device of Kotchick to derive the currently claimed invention.

The presents invention has effects of recycling light from a light source, and condensation of light (collimate) to the normal direction. The normal direction light is transmitted and the light

of oblique angle is reflected by the second polarizer so that the condensation can be achieved by a combination of retarder and reflective polarizers.

The Office Action notes that Kotchick does not teach that the $\lambda/4$ retarder layer has a retardation value of at least $\lambda/8$ with respect to incident light inclined by at least 30° to a normal direction; however, maintains that one of skill in the art would have found it obvious to substitute the retardation plate 1708 of Kotchick with a “functional equivalent quarter wave plate/retardation layer which is least sensitive to incident angles so as to enhance the contrast/efficiency of the system.” See page 4, lines 7-9 of the Office Action

Applicants respectfully submit that one of skill in the art would not modify the device of Kotchick in the manner required by claim 1. Specifically, there is no reason for one of skill in the art to modify the transreflector so that the $\lambda/4$ plate includes a value of at least $\lambda/8$ with respect to incident light inclined at least 30° to a normal direction. The device of Kotchick, does not benefit from such a modification “so as to enhance contrast/efficiency of the system” as the Office suggests. Specifically, the retarder layer 1708 of Kotchick serves the purpose of acting with the lower reflective polarizer 1706 to form a linear reflecting polarizer having a polarization transmission state oriented at an alignment angle, θ , relative to the polarization transmission state of the absorbing polarizer 1702. This is different from having a retardation layer of at least $\lambda/8$ with respect to incident light inclined by at least 30° to the normal direction so as to change incident light by the retardation effect so that the increased polarized light components are reflected by the second reflective polarizer (a); and thereby, the reflected polarized lights are retarded again to have a changed polarization state in such a manner that they can pass through

the first reflective polarizer (a) to the source where they may become polarized lights in the normal direction and thus enhance brightness. Wherefore, the technical thought of modifying (controlling) the retardation value in oblique angle or Nz coefficient could not be reasoned by one of skill in the art in light of Kotchick.

In summary, amended claim 1 provides retardation layer with a retardation value of about $\lambda/4$ in a normal direction, and at least $\lambda/8$ in an oblique angle (at least 30°). A general retardation plate has a Nz coefficient of 1.0 and a retardation value in an oblique angle is larger than that of normal direction. Thus, a general $\lambda/4$ plate such as disclosed in Kotchick has more than $\lambda/8$ of retardation in an oblique angle, and present claim 1 could not be reasoned from Kotchick. As such, the present invention as set forth in amended claim 1 is not obvious in light of Kotchick under 35 U.S.C. §103.

In view of the aforementioned amendments and accompanying remarks, Applicants submit that the claims, as herein amended, are in condition for allowance. Applicants request such action at an early date.

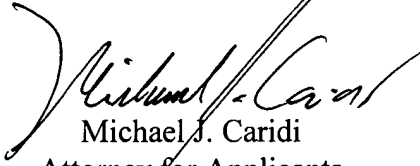
If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

Application No.: 10/551,140
Art Unit: 2872

Amendment
Attorney Docket No.: 053158

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,
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